

Check Your Understanding

1. **Number Sense** If you multiply 6 by $\frac{1}{2}$, is the answer greater than or less than the result of multiplying 6 by $\frac{1}{3}$? Explain.

Match each expression with its product.

2. $\frac{1}{4} \times \frac{1}{3}$

A. $\frac{3}{8}$

3. $\frac{2}{3} \cdot \frac{2}{5}$

B. $\frac{4}{15}$

4. $\frac{1}{2} \times \frac{3}{4}$

C. 6

5. $\frac{6}{7} \cdot 7$

D. $\frac{1}{12}$

Homework Exercises

For more exercises, see Extra Skills and Word Problems.

GO for Help

For Exercises	See Examples
6–13	1
14–21	2

Find each product. You may find a model helpful.

6. $\frac{1}{2} \times \frac{3}{8}$

7. $\frac{5}{11} \times \frac{2}{7}$

8. $\frac{3}{4} \times \frac{11}{12}$

9. $\frac{2}{9} \times \frac{4}{8}$

10. $\frac{4}{9} \cdot \frac{3}{10}$

11. $\frac{3}{5}$ of $\frac{2}{3}$

12. $\frac{4}{11} \cdot \frac{5}{8}$

13. $\frac{9}{10}$ of $\frac{2}{5}$

14. $\frac{3}{4} \cdot 20$

15. $\frac{3}{8} \times 5$

16. $\frac{11}{14}$ of 28

17. $\frac{5}{12} \cdot 30$

18. $\frac{7}{9}$ of 21

19. $\frac{1}{6} \cdot 6$

20. $\frac{3}{10} \times 45$

21. **Fitness** In gym class, you run $\frac{3}{4}$ mile. Your gym teacher runs 3 times that distance each day. How far does your teacher run?

GPS

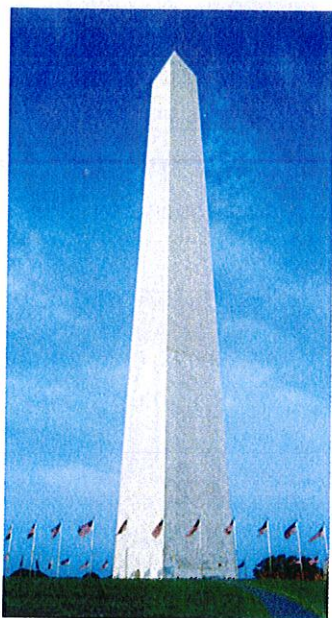
22. **Guided Problem Solving** At the movies, you eat all but $\frac{1}{3}$ of a box of popcorn. Your friend eats $\frac{2}{3}$ of what is left. Who eats more popcorn, you or your friend?

- **Understand the Problem** Draw a picture to help you understand the problem.
- **Make a Plan** How can you find the answer using your picture?

23. **Reasoning** Adding $\frac{3}{8}$ and $\frac{5}{8}$ is different from multiplying the two fractions. Explain why.

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Algebra Evaluate each expression for $x = \frac{2}{3}$.

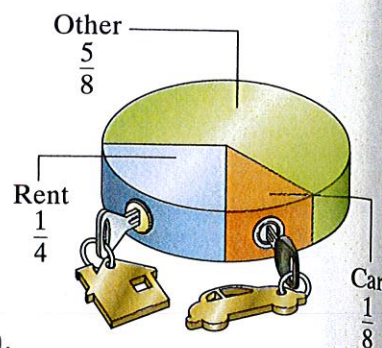
24. $15x$

25. $\frac{3}{2}x$

26. $\frac{9}{10}x$

27. $\frac{2}{3}x$

28. **Budgets** The graph at the right describes Paul's monthly spending. He makes \$2,712 each month. How much does Paul spend each month on his rent and car combined?



29. **Writing in Math** Is it necessary to have a common denominator when you multiply two fractions? Explain.

30. **Monuments** The width of the base of the Washington Monument is about $\frac{1}{10}$ of its height. The height of the monument is about 555 feet tall. Find the width of the base.

31. **Challenge** Find $8\frac{2}{3} \cdot 7\frac{1}{2}$.

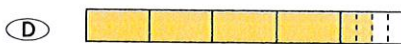


Test Prep and Mixed Review

Practice

Multiple Choice

32. Meg needs 5 yards of fencing to make a pen for her rabbit. She has $\frac{3}{4}$ yard of fencing. Each model below represents 5 yards of fencing. Which model can Meg use to find the amount of fencing she still needs?



33. What is the prime factorization of 420?

(F) $2^2 \cdot 3 \cdot 3^5$

(H) $2^2 \cdot 3 \cdot 5 \cdot 7$

(G) $2 \cdot 3 \cdot 5 \cdot 7$

(J) $2 \cdot 3 \cdot 5^2 \cdot 7$

34. Julio needs 2 hours to do his homework. He will take one 30-minute break. He wants to finish by 9:30 P.M. What is the latest time that Julio can begin his homework?

(A) 6:00 P.M.

(B) 6:30 P.M.

(C) 7:00 P.M.

(D) 7:30 P.M.

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For Exercises

See Lesson

35–38

5-3

Find each sum or difference.

35. $\frac{5}{6} + \frac{1}{3}$

36. $\frac{4}{5} - \frac{1}{2}$

37. $\frac{7}{9} - \frac{3}{5}$

38. $\frac{3}{10} + \frac{5}{8}$